

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Denholm Seeds

Whereas, THERE HAS BEEN PRESENTED TO THE

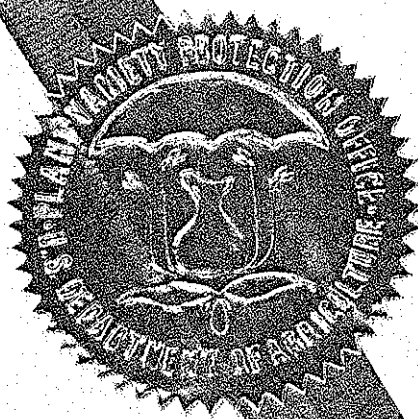
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (7 U.S.C. 2321 ET SEQ.)

MARIGOLD

'Queen Bee'



Attest:

James H. Lee
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 20th day of November in the year of our Lord one thousand nine hundred and eighty.

W. B. Bery
Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY		1b. VARIETY NAME Queen Bee		FOR OFFICIAL USE ONLY PV NUMBER 7900081	
2. KIND NAME Marigold		3. GENUS AND SPECIES NAME Tagetes patula		FILING DATE 5-22-79	TIME 2:30 P.M.
4. FAMILY NAME (BOTANICAL) Compositae		5. DATE OF DETERMINATION July, 1974		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 5-22-79 9/29/80
6. NAME OF APPLICANT(S) Denholm Seeds		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 1381 222 North A Street, Lompoc, CA. 93436		8. TELEPHONE AREA CODE AND NUMBER 805/736-4563	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION California		11. DATE OF INCORPORATION 1952
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: David G. Lemon Denholm Seeds, P.O. Box 1381, Lompoc, CA. 93436					
13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:					
<input checked="" type="checkbox"/> 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
<input checked="" type="checkbox"/> 13B. Exhibit B, Novelty Statement.					
<input checked="" type="checkbox"/> 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)					
<input checked="" type="checkbox"/> 13D. Exhibit D, Additional Description of the Variety.					
14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO			14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.) <div style="text-align: right; margin-top: 10px;">RJ: 3/17/80</div>					
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					
16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					

May 16, 1979

(DATE)

David G. Lemon

(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

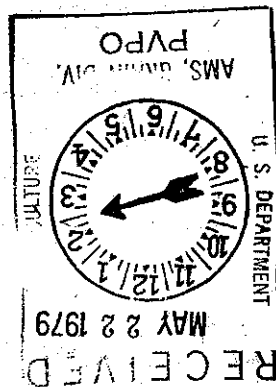
INSTRUCTIONS

Rec'd 2:30 P.M. MAY 2 1979

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



7900081

MARIGOLD 'QUEEN BEE'

13 Exhibit A

Origin and Breeding History of the Variety

1. 'Queen Bee' was found as a mutant (or possibly an outcross) in the variety 'Stardust' (PVP#7400073) and was selected under the number 1-1D-20 in 1972. In 1973 this was grown again under the number 3-1E-419-8. This proved to be a good line and it was grown again in 1974 under the number 7691. At this time it was determined to be a new and distinct variety of French Marigold. Further increases were made in 1975 and 1976 and in 1977 this variety was entered in the All America and Fleuroselect Trials. At the same time a further increase was made to determine its stability. This variety was awarded a Bronze Medal from the 1977 Fleuroselect Trials and is scheduled for 1980 introductions. Crops were grown in 1977, 1978 and a large acreage is planted for 1979.
2. The variety is stable for height and color is very uniform for this type of bicolor.

MARIGOLD, 'QUEEN BEE'

Application No. 7900081

Addendum to EXHIBIT A.

1. Frequency of variants is about 1 per 500 slightly taller plants and the bicoloring will vary with temperature effects. Plants contain more red pigment during the cool, early part of the season.
2. This variety was entered in the 1977 All America and Fleuroselect Trials. It won a Bronze Medal in Fleuroselect. In 1979 it was used as a comparison in the All America Trials. It has been singled out for special mention at the Michigan State trials in 1979 (see America Vegetable Grower article by Dr. Will Carlson in October 1979 issue).

Original Replaced with ^{this} revised EXHIBIT B R/S 7/8/80

MARIGOLD, 'QUEEN BEE'

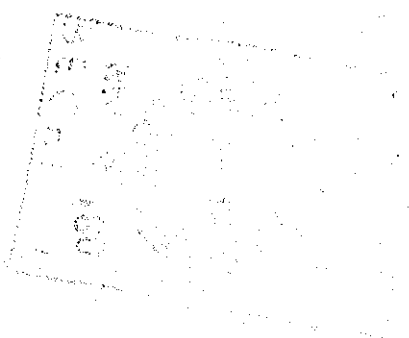
Application No. 7900081

Exhibit B. Novelty Statement

'Queen Bee' is most similar to the varieties 'Stardust' and 'Honeycomb'. The flower color is very similar to 'Stardust' but the bicolor pattern is quite distinct from this variety. 'Queen Bee' has a very regular bicolor pattern of Garnet Brown HCC 918/3 with the ground color Lemon Yellow HCC 4/1. 'Stardust' tends to be quite variable for bicoloring. Sometimes this is hardly evident at all, whereas 'Queen Bee' will always show this distinct bicolor from the base of the petals outwards. 'Stardust' tends towards a fleck type of bicoloring.

For the bicoloring 'Queen Bee' is most similar to the variety 'Honeycomb'. Bicolor pattern is Garnet Brown HCC 918/3 in both of these varieties. 'Queen Bee' has ground color of Lemon Yellow HCC 4/1, whereas 'Honeycomb' has Tangerine Orange HCC 9/1.

'Queen Bee' won the Fleuroselect Bronze Medal in competition against 'Stardust' and in that trial was judged much more uniform for the bicolor effect.



MARIGOLD 'QUEEN BEE'

Application No. 7900081

Exhibit B Novelty Statement

'Queen Bee' is closest in color to the variety 'Stardust'. The major difference is in the intensity of the bicolor pattern. 'Queen Bee' contains much more of the Garnet Brown coloration at the base of the petals. At most times this will cover about 60% of the total surface area of the individual petals whereas 'Stardust' would be in the 25% range. 'Queen Bee' has a very regular color pattern with the Garnet Brown HCC 918/3 color being from the base of the petal up. 'Stardust' by comparison has much less of this coloration and under warm climatic conditions will lose much of the bicolor pattern.

For bicolor pattern 'Queen Bee' is closest to the variety 'Honeycomb'. Bicolor pattern for both of these is Garnet Brown HCC 918/3. 'Queen Bee' has ground color Lemon Yellow HCC 4/1 whereas 'Honeycomb' is Tangerine Orange HCC 9/1.

'Queen Bee' won the Fleuroselect (all Europe) Bronze Medal for 1980 in competition with 'Stardust'. In that trial it gained high points for its height, color and uniformity. The judges particularly liked the uniformity and intensity of the bicolor pattern.

OBJECTIVE DESCRIPTION OF VARIETY
MARIGOLD (TAGETE)

INSTRUCTIONS - See Reverse.

NAME OF APPLICANT(S) Denholm Seeds	FOR OFFICIAL USE ONLY PVPO NUMBER 7900081
ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code) P.O. Box 1381 222 North A Street, Lompoc, CA. 93436	VARIETY NAME OR TEMPORARY DESIGNATION Queen Bee

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., 0 8 9 or 0 8) when number is either 99 or less or 9 or less.

1. SPECIES TYPE:

1 = ERRECTA (African) 2 = PATULA (French) 3 = TENUIFOLIA (Signata) 4 = LUCIDA (Sweet)
5 = OTHER (Specify) _____

2. PLOIDY:

1 = DIPLOID (n = _____) 2 = TRIPLOID (n = _____) 3 = TETRAPLOID (n = _____)

3. PLANT TYPE/HABIT:

1 = EXTRA DWARF (Miniature, petite) < 20 CM. 2 = DWARF 25- 35 CM. 3 = SEMIDWARF 40- 55 CM. 4 = TALL > 60 CM.
1 = ERECT 2 = SEMIERECT 3 = DECUMBENT
1 = COMPACT 2 = LAX
1 = Flowering: 1 = LONG SEASON 2 = SHORT SEASON

4. LEAF (Middle of first flowering branch):

2 = Type: 1 = SIMPLE 2 = COMPOUND
4 = Leaflet: 1 = OVATE 2 = LANCEOLATE 3 = ELLIPTIC 4 = FILIFORM
5 = Margin: 1 = ENTIRE 2 = CRENATE 3 = SERRATE 4 = DENTATE 5 = INCISED
0 1 0 CM. LONG 6 0 MM. WIDE 1 = Anthocyanin pigment in petioles: 1 = ABSENT 2 = PRESENT
1 = Glands: 1 = PUNCTATE 2 = LARGE DOTS 2 = Glands: 1 = BASAL 2 = APICAL
4 = Odor: 1 = NONE 2 = MILD FRAGRANCE 3 = STRONG FRAGRANCE 4 = MILD "MARIGOLD" 5 = STRONG "MARIGOLD"

5. STEM:

2 = 1 = STRAIGHT 2 = ZIGZAG 2 = 1 = BRITTLE 2 = FLEXIBLE
3 = Anthocyanin: 1 = ABSENT 2 = ALONG VEINS ONLY 1 5 CM. FROM BASE OF STEM TO INVOLUCRE OF TERMINAL FLOWER
3 = SOLID COLORATION
0 7 CM. FROM BASE OF MAIN STEM TO AXIL OF TOP BRANCH 0 5 CM. FROM AXIL OF TOP BRANCH TO INVOLUCRE OF TERMINAL FLOWER
0 1 NO. OF INTERNODES BELOW FIRST BRANCH 4 NO. OF FIRST ORDER BRANCHES (from main stem)

6. FLOWER:

3 = Type: 1 = CARNATION 2 = CHRYSANTHEMUM 3 = OTHER Crested
2 = 1 = SINGLES 2 = DOUBLES
2 = Silhouette: 1 = FLATTENED 2 = ROSETTE 3 = GLOBULAR
4 = Odor: 1 = NONE 2 = MILD FRAGRANCE 3 = STRONG FRAGRANCE 4 = MILD "MARIGOLD" 5 = STRONG "MARIGOLD"

6. FLOWER: (Continued)

7900081

1 Ray: 1 = FLATTENED 2 = CURLED/TWISTED (Fantastic)

2 Apices: 1 = ENTIRE 2 = LOBED 3 = NOTCHED

1 SURFACE - Dorsal: }
1 SURFACE - Ventral: } 1 = GLABROUS 2 = PUBESCENT 3 = PUBESCENT ON APICE ONLY1 LUSTER - Dorsal: }
2 LUSTER - Ventral: } 1 = SHINY 2 = DULL

4 PATTERN - Dorsal: } 1 = SOLID 2 = SPOTTED 3 = STRIPED

1 PATTERN - Ventral: } 4 = PICOTEE 5 = OTHER (Specify) _____

2 Color: 1 = SOLID 2 = BICOLOR (Specify colors): Primary LEMON YELLOW HCC 4/1
Gold Secondary Mahogany Red
State color standards used: GARNET BROWN
HCC 918/3SIZE (Use outer row of first matured flower): 0 4 MM. LONG 0 5 MM. WIDE ROYAL HORT SOC. COLOUR CHART
R/S 9/4/80

3 Disc: 1 = ABSENT 2 = PRESENT, COVERED 3 = PRESENT, UNCOVERED

2 Type: 1 = NOT QUILLED 2 = QUILLED

7. DISEASE RESISTANCE (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

0 ROOT-ROT (*Phytophthora*) 0 VIRUS YELLOWS0 GREY MOLD (*Botrytis*) 0 FUSARIUM WILT0 STEM ROT (*Sclerotinia*) 0 WITCHES BROOM

8. INDICATE A VARIETY THAT MOST NEARLY RESEMBLE THAT SUBMITTED

CHARACTER	VARIETY	CHARACTER	VARIETY
Plant shape	Honeycomb	Flower size	Honeycomb
Plant size	Honeycomb	Flower shape	Honeycomb
Foliage	Honeycomb	Flower color	Stardust

INSTRUCTIONS

REFERENCES: The following publications may be used as a reference aid for completing this form:

- (a) Bailey, L. H., 1949, Manual of Cultivated Plants, MacMillan.
- (b) Royal Horticulture Society, 1965, Dictionary of Gardening, Oxford.
- (c) Wyman, Donald, 1971, Wyman's Gardening Encyclopedia, MacMillan.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.

MARIGOLD 'QUEEN BEE'

13 Exhibit ~~E~~ D RJS 9/4/80Additional Description of Variety

Marigold 'Queen Bee' is another addition to our Royal Crested series of Marigolds which already includes the P.V.P. varieties 'Honeycomb', 'Goldfinch' and 'Stardust'. Closest comparison for color would be Stardust (P.V.P. 7400073) and for color pattern would be Honeycomb (P.V.P. 7400072). It is earlier flowering than the two above varieties and the color is a distinct red and golden yellow bicolor.